

THE INVENTION CLAIMED IS

1. An apparatus for delivering a predetermined amount of a fluid for biological or chemical processing and/or analysis, comprising:

a tube;

a piston plunger positioned to slide inside of said tube for dispensing said predetermined amount of a fluid for biological or chemical processing and/or analysis, said piston plunger responsive to a pneumatic force;

a connector operatively connected to said tube for transferring said predetermined amount of a fluid for biological or chemical processing and/or analysis;

an actuator operatively connected to said tube and piston plunger for providing said pneumatic force to said piston plunger; and

valving operatively connected to said actuator to said tube and piston plunger, said valving transmitting said pneumatic force from said actuator to said tube and piston plunger.

2. The apparatus of claim 1 including a spring that biases said piston plunger in opposition to said pneumatic force.

3. The apparatus of claim 1 including a multiplicity of tubes, a multiplicity of piston plungers positioned to slide inside of said tubes, and a multiplicity of connectors operatively connected to said tubes.

4. A dispensing system for delivering a predetermined amount of a fluid for biological or chemical processing and/or analysis, comprising:

dispensing means for moving said predetermined amount of a fluid for biological or chemical processing and/or analysis, said dispensing means operated by a pneumatic force;

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connection means for delivering said predetermined amount of a fluid for biological or chemical processing and/or analysis, said connection means operatively connected to said dispensing means;

actuator means for providing said pneumatic force to said dispensing means, said actuator means operatively connected to said dispensing means; and

valving means for transmitting said pneumatic force from said actuator means to said dispensing means, said valving means operatively connected to said actuator means and said dispensing means.

5. The dispensing system of claim 4 wherein said dispensing means comprises a tube and a piston plunger inside of said tube that slides inside said tube and moves said predetermined amount of a fluid for biological or chemical processing and/or analysis through said connector.

6. The pneumatic dispensing system of claim 4 wherein said dispensing means includes a spring that biases said piston plunger in opposition to said pneumatic force.

7. The pneumatic dispensing system of claim 4 including a multiplicity of said dispensing means arranged in an array to delivering a multiplicity of said predetermined amounts of a fluid for biological or chemical processing and/or analysis.